

CONTRACT REQUEST FORM (CRF)A) New Agreement 400-17-005 (To be completed by CGL Office)

400 Efficiency Renewable Energy Division	Adrian Ownby	37	916-651-3008
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Bruce A. Wilcox, P.E.	94-3394591
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Residential Building Science Technical Support
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7 / 1 / 2018	12 / 31 / 2021	\$ 4,000,000
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<input type="checkbox"/> Operational agreement (see CAM Manual for list) to be approved by Executive Director			
<input type="checkbox"/> ARFVTP agreements under \$75K delegated to Executive Director.			
Proposed Business Meeting Date	5 / 9 / 2018	<input type="checkbox"/> Consent	<input checked="" type="checkbox"/> Discussion
Business Meeting Presenter	Adrian Ownby	Time Needed:	5 minutes

Please select one list serve. Efficiency

Agenda Item Subject and Description

BRUCE A. WILCOX, P.E. Proposed resolution approving Agreement 400-17-005 with Bruce A. Wilcox, P.E., for a \$4,000,000 contract to provide technical support for the Residential Building Energy Efficiency Standards process. (COIA and ERPA funding) Contact: Adrian Ownby. (Staff Presentation: 5 minutes)

1. Is Agreement considered a "Project" under CEQA?
☐ Yes (skip to question 2) ☒ No (complete the following (PRC 21065 and 14 CCR 15378)):
 Explain why Agreement is not considered a "Project":
 Agreement will not cause direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment because contract mostly involves engineering analysis and software development.

2. If Agreement is considered a "Project" under CEQA:
☐ a) Agreement **IS** exempt. (Attach draft NOE)
☐ Statutory Exemption. List PRC and/or CCR section number: _____
☐ Categorical Exemption. List CCR section number: _____
☐ Common Sense Exemption. 14 CCR 15061 (b) (3)
 Explain reason why Agreement is exempt under the above section: _____

☐ b) Agreement **IS NOT** exempt. (Consult with the legal office to determine next steps.)
 Check all that apply
☐ Initial Study ☐ Environmental Impact Report
☐ Negative Declaration ☐ Statement of Overriding Considerations
☐ Mitigated Negative Declaration

Legal Company Name:	Budget	SB	MB	DVBE
DHS Associates	\$	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
See attached list of all 36 subcontractors	\$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	\$	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Legal Company Name:

CONTRACT REQUEST FORM (CRF)**J) Budget Information**

Funding Source	Funding Year of Appropriation	Budget List No.	Amount
Other	2017-2018	370.400	\$250,000
Other	2018-2019	See Attached	\$1,250,000
Other	2019-2020	See Attached	\$1,250,000
Other	2020-2021	See Attached	\$1,250,000
Funding Source			\$
R&D Program Area: Energy Efficiency			\$4,000,000
Explanation for "Other" selection	Cost of Implementation Account, State - ERPA (see attached)		
Reimbursement Contract #:	Federal Agreement #:		

Name:	Bruce Wilcox	Name:	Bruce Wilcox
Address:	1110 Monterey Ave.	Address:	1110 Monterey Ave.
City, State, Zip:	Berkeley, CA 94707	City, State, Zip:	Berkeley, CA 94707
Phone:	510-528-4406	Fax:	510-588-4678
E-Mail:	bwilcox@lmi.net		

<input checked="" type="checkbox"/> Solicitation RFQ	Solicitation #:	RFQ-16-405	# of Bids:	1	Low Bid?	<input type="checkbox"/> No <input type="checkbox"/> Yes
<input type="checkbox"/> Non Competitive Bid (Attach CEC 96)						
<input type="checkbox"/> Exempt Select Exemption (see instructions)						

<input checked="" type="checkbox"/> Private Company (including non-profits)
<input type="checkbox"/> CA State Agency (including UC and CSU)
<input type="checkbox"/> Government Entity (i.e. city, county, federal government, air/water/school district, joint power authorities, university from another state)

	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
If yes, check appropriate box:	<input type="checkbox"/> SB <input type="checkbox"/> MB <input type="checkbox"/> DVBE

<input type="checkbox"/> Not Applicable (Agreement is with a CA State Entity or a membership/co-sponsorship)
<input type="checkbox"/> Public Resources Code 25620, et seq., authorizes the Commission to contract for the subject work. (PIER)
<input checked="" type="checkbox"/> The Services Contracted:
<input checked="" type="checkbox"/> are not available within civil service
<input checked="" type="checkbox"/> cannot be performed satisfactorily by civil service employees
<input checked="" type="checkbox"/> are of such a highly specialized or technical nature that the expert knowledge, expertise, and ability are not available through the civil service system.
<input type="checkbox"/> The Services are of such an:
<input type="checkbox"/> urgent
<input type="checkbox"/> temporary, or
<input type="checkbox"/> occasional nature
that the delay to implement under civil service would frustrate their very purpose.

Justification:

This architectural and engineering professional services technical support contract will provide the Energy Commission access to residential building energy science experts that are not available within state service. The Contractor will work under the direction of the Energy Commission to complete engineering and econometric analyses as well as software tool development.

<input checked="" type="checkbox"/> A. Reimbursement in arrears based on:	<input checked="" type="checkbox"/> Itemized Monthly	<input type="checkbox"/> Itemized Quarterly	<input type="checkbox"/> Flat Rate	<input type="checkbox"/> One-time
<input type="checkbox"/> B. Advanced Payment				
<input type="checkbox"/> C. Other, explain:				

CONTRACT REQUEST FORM (CRF)**q) Retention**

1. Is Agreement subject to retention? ☐ No ☒ Yes
 If Yes, Will retention be released prior to Agreement termination? ☐ No ☒ Yes

Rates were negotiated under the RFQ process based on a salary survey of comparable entities for like work

1. ☐ Exempt (Interagency/Other Government Entity)
 2. ☒ Meets DVBE Requirements DVBE Amount:\$ _____ DVBE %: 3%
 ☐ Contractor is Certified DVBE
 ☒ Contractor is Subcontracting with a DVBE: DHS Associates
 3. ☐ Contractor selected through CMAS or MSA with no DVBE participation.
 4. ☐ Requesting DVBE Exemption (attach CEC 95)

1. Will there be Work Authorizations? ☐ No ☒ Yes
 2. Is the Contractor providing confidential information? ☒ No ☐ Yes
 3. Is the contractor going to purchase equipment? ☒ No ☐ Yes
 4. Check frequency of progress reports
 ☒ Monthly ☐ Quarterly ☐ Other...
 5. Will a final report be required? ☐ No ☒ Yes
 6. Is the Agreement, with amendments, longer than a year? If yes, why? ☐ No ☒ Yes
 A multi-year contract is necessary to complete the software development, testing and deployment.

1. Exhibit A, Scope of Work ☐ N/A ☒ Attached
 2. Exhibit B, Budget Detail ☐ N/A ☒ Attached
 3. CEC 96, NCB Request ☒ N/A ☐ Attached
 4. CEC 30, Survey of Prior Work ☒ N/A ☐ Attached
 5. CEC 95, DVBE Exemption Request ☒ N/A ☐ Attached
 6. CEQA Documentation ☒ N/A ☐ Attached
 7. Resumes ☐ N/A ☒ Attached
 8. CEC 105, Questionnaire for Identifying Conflicts ☐ N/A ☒ Attached

 Agreement Manager

 Date

 Office Manager

 Date

 Deputy Director

 Date

CEC-94 Attachment 1

Prime Contractor: Bruce Wilcox, PE.

Subcontractors:

**360 Analytics
AquaCraft
Balance Point Home Performance
Bentley Systems Inc.
Benya Burnett Consultancy
Big Ladder Software
Building Science Corp.
CalCERTS
Calthrope Analytics
Charles S. Barnaby
Chitwood Energy Management
Danny S. Parker
DHL Consulting, LLC
DHS Associates
Ecotope Inc.
Enercomp Inc.
Energy and Environmental Economics Inc.
Energy Docs Home Performance
Energy Solutions
Environmental Design Solutions
Frank A. Bergamaschi Architect
Frontier Energy (formerly Davis Energy Group)
Hitchcock Consulting
James D. Lutz
Jennifer Roberts
Klimaat Consulting and Innovation Inc.
Kolderup Consulting
L'Monte Information Services
Proctor Engineering Group
RASENT Solutions LLC
Solar Consulting Services
Stone Energy Associates
TRC Energy Services
University of Illinois at Urbana-Champaign Applied Research Institute
White Box Technologies
Wrightsoft Corp.**

CEC-94 – Attachment 2

Available Funding

Funding for this contract will be subject to the availability of funds in the FY2017-18, FY 2018-19, FY 2019-20 and FY 2020-21 Budget Acts. There is a maximum of up to \$4,000,000 available to fund the four year contract resulting from this RFQ. This is an hourly rate plus cost reimbursement contract with a ceiling on the total contract amount.

<i>FISCAL YEAR</i>	<i>AMOUNT</i>
2017-2018	\$250,000
2018-2019	\$1,250,000
2019-2020	\$1,250,000
2020-2021	\$1,250,000

Funding for this Agreement is from Energy Resources Program Account (ERPA) and Cost of Implementation Account (COIA) Funds.

ERPA funds include \$1,000,000.00 from FY 2018-2019, \$1,000,000.00 from FY 2019-2020 and \$1,000,000 from FY 2020-2021.

COIA funds include \$250,000 from FY 2017-2018, \$250,000 from FY 2018-2019, \$250,000 from FY 2019-2020, and \$250,000 from FY 2020-2021.

EXHIBIT A

SCOPE OF WORK

Purpose

The purpose of this agreement is to contract with a team of consultants for technical support to:

- Update the Standards for residential buildings; and
- Update Compliance Tools and related materials to support the Standards for residential buildings.

Work on this contract will focus on the 2019 and 2022 Standards updates, but may also involve implementation of the 2016 Standards update or preliminary work on later Standards updates (2025 and beyond).

ACRONYMS/GLOSSARY

Specific acronyms and terms used throughout this scope of work are defined as follows:

ACRONYMS & TERMS	DEFINITION
ASHRAE	American Society of Heating, Refrigeration and Air-conditioning Engineers
CAM	Commission Agreement Manager
CAO	Commission Agreement Officer
CBECC-Res	California Building Energy Code Compliance application for low-rise residential buildings
CO ₂ e	Carbon Dioxide equivalent
Compliance Document	Any of the documents specified in Section 10-103(a) of the 2016 Standards that are used to demonstrate compliance with California Code of Regulations, Title 24, Part 6 (i.e., Certificate of Compliance, Certificate of Installation, Certificate of Acceptance, and Certificate of Verification).
Compliance Manual	The Residential Compliance Manual developed by the Energy Commission, under Public Resources Code, Section 25402.1(e), to aid designers, builders, and contractors in meeting the energy efficiency requirements for residential buildings.
CPUC	California Public Utilities Commission
CSE	California Simulation Engine
Energy Commission	California State Energy Resources Conservation and Development Commission.
HERS	Home Energy Rating System, used in California Code of Regulations, Title 20, Section 1670 et seq.
HVAC	Heating, Ventilating and Air Conditioning
State	State of California
TDV	Time Dependent Valuation, used as the energy cost metric in the 2016 Standards
WAM	Work Authorization Manager

EXHIBIT A

SCOPE OF WORK

WORK AUTHORIZATIONS

The Agreement that results from this solicitation shall be conducted as a “Work Authorization” Agreement. No work shall be undertaken unless authorized by the CAM through a specific written document called a “work authorization.”

The CAM will prepare and issue the written work authorizations and shall set a maximum price, budget, and schedule for the work to be performed. The CAM will work, in consultation with the Contractor, to assign work to either the Contractor or a subcontractor.

Quality control activities:

- In work authorization budgets, all quality control work must be specified by line item; and
- Review of subcontractor work shall be billed to the individual technical work authorizations.

No WORK GUARANTEE

The Energy Commission does not guarantee any minimum or maximum amount of work to the prime Contractor or any Subcontractor under the Agreement.

WORKSHOPS & HEARINGS

All workshops and hearings are sponsored, organized, and facilitated by the Energy Commission. The Energy Commission is responsible for any costs associated with a workshop or hearing. Contractor will provide labor only.

Incidental Services

Contractor shall provide incidental services to support the technical tasks that the Energy Commission will undertake to update, develop, and implement the Standards in the general topic areas listed below. Technical Tasks 2-6 provide more detailed task activities for these areas:

- Economic & Financial Analysis of the Standards Work
- Graphic Design/Document Support for reports and other deliverables
- Public Outreach & Communication/ Marketing/ Public Relations/ Program Development necessary to complete the goals of this agreement

Application Use & Development

All applications developed under this contract will be subject to open source licensing requirements, as described in Exhibit D, paragraph 8, unless the Energy Commission directs different ownership and licensing requirements in a work authorization. No pre-existing proprietary applications will need to be modified in order to perform the tasks outlined in this Agreement. The Energy Commission owns or has open source license access to any application that the Contractor will modify under the terms of this Agreement.

EXHIBIT A

SCOPE OF WORK

Draft and Final Deliverables/Reports

The Contractor may be required to produce several iterations of draft deliverables in order to incorporate Energy Commission's comments and edits. A deliverable is considered final when the CAM indicates in writing that the deliverable is considered final. When creating reports, the Contractor shall use and follow, unless otherwise instructed in writing by the Commission Agreement Manager (CAM), the latest version of the Style Manual for Preparing Contract and Consultant Reports for the Energy Commission, which is published on the Energy Commission's website at the following link:

http://www.energy.ca.gov/contracts/consultant_reports/index.html

Each final hard copy deliverable shall be delivered as one original, reproducible, 8 ½" by 11", camera-ready master in black ink, unless otherwise directed. Illustrations and graphs shall be sized to fit an 8 ½" by 11" page and readable if printed in black and white.

Electronic File Format

The Contractor shall deliver an electronic copy (CD ROM or memory stick or as otherwise specified by the CAM) of the full text in a compatible version of Microsoft Word (.doc or .docx).

The following describes the accepted formats of electronic data and documents provided to the Energy Commission as contract deliverables and establishes the computer platforms, operating systems and application versions that will be required to review and approve all application deliverables.

- Data sets shall be in Microsoft (MS) Access or MS Excel file format.
- PC-based text documents shall be in MS Word file format.
- Documents intended for public distribution shall be in PDF file format, with the native file format provided as well.
- Project management documents shall be in MS Project file format.

Primary Tasks

The major categories of work are divided into the following tasks:

TASK #	DESCRIPTION OF TASK
1	Agreement Management
2	Standards Update Measure Identification and Analysis
3	Residential Standards Public Domain Compliance Application Development and Maintenance
4	Enhance and Support Data Exchange Infrastructure for HERS Provider Data Registries
5	Residential Public Domain Compliance Application Deployment
6	Contingencies and Additional Topic Areas for Standards Technical Support

EXHIBIT A

SCOPE OF WORK

TASK 1 – AGREEMENT MANAGEMENT

Each Work Authorization will reflect the maximum that can be spent for Agreement Management for each fiscal year. A maximum of 12% of the total Agreement budget will be allocated for this task. The Contractor will be required to perform contract management and administrative duties to manage the Agreement.

The Contractor's responsibilities under this task include, but are not limited to the following:

Task 1.1 Kick-off Meeting

The goal of this task is to establish the lines of communication and procedures for implementing this Agreement.

The Contractor shall:

- Attend a "kick-off" meeting with the CAM, the Contracts Agreement Officer, and a representative of the Accounting Office. The meeting will be held in Sacramento, CA and the CAM will designate the specific location. The Contractor shall include their Project Manager, Contracts Administrator, Accounting Officer, and others designated by the CAM in this meeting. The administrative and technical aspects of this Agreement will be discussed at the meeting.
- If necessary, prepare an updated Schedule of Deliverables based on the decisions made in the kick-off meeting.

The CAM shall:

- Arrange the meeting including scheduling the date and time.
- Provide an agenda to all potential meeting participants prior to the kick-off meeting.

Deliverables:

- An Updated Schedule of Deliverables (if applicable)

Task 1.2 Program Meetings and Briefings

The Contractor and subcontractor shall:

- At the request of the Energy Commission's CAM, be available for meetings or to provide written or verbal program briefings to the Energy Commission's staff or others. The cost of meetings with local governments and public institutions will be included in each Work Authorization. The cost of meetings requested specifically by the Contractor shall be borne solely by the Contractor. The Energy Commission expects to hold no more than one (1) program briefing meeting per quarter.

Task 1.3 Invoices

The Contractor shall:

- Prepare invoices for all reimbursable expenses incurred performing work under this Agreement in compliance with the Exhibit B of the Terms and Conditions of the Agreement. Invoices shall be submitted with the same frequency as progress reports (task 1.4). Invoices must be submitted to the Energy Commission's Accounting Office.

EXHIBIT A

SCOPE OF WORK

Deliverables:

- Invoices

Task 1.4 Manage Subcontractors:

The goal of this task is to manage subcontractors' quality control activities. Review of subcontractor work shall be billed to the individual Work Authorizations.

The Contractor shall:

- At the direction of the CAM, review and prepare work authorization scopes and budgets
- Enter into subcontracts.
- Enforce subcontract provisions.
- In the event of subcontractor failure to perform, recommend solutions to resolve the problem.
- When new subcontractors are added, the contractor shall ensure that: 1) the new subcontractors comply with the Terms and Conditions of the Agreement, and 2) notify the CAM who will follow the Energy Commission's process for adding or replacing subcontractors.

Task 1.5 Progress Reports

The goal of this task is to periodically verify that satisfactory and continued progress is made towards achieving the objectives of this Agreement.

The Contractor shall:

- Prepare progress reports that summarize all Agreement activities conducted by the Contractor for the reporting period, including an assessment of the ability to complete the Agreement within the current budget and any anticipated cost overruns. Each progress report is due no later than 15 calendar days after the end of the reporting period. The CAM will provide the format for the progress reports.

Deliverables:

- Monthly Progress Reports

Task 1.6 Final Meeting

The goal of this task is to discuss closeout of this Agreement and review the project.

The Contractor shall:

- Meet with Energy Commission staff prior to the term end date of this Agreement. The meeting will be held in Sacramento, CA, and the CAM will designate the specific location. This meeting will be attended by the Contractor Project Manager and the CAM. The CAM will determine any additional appropriate meeting participants. The administrative and technical aspects of Agreement closeout will be discussed at the meeting.
- Present findings, conclusions, and recommended next steps (if any) for the Agreement.

EXHIBIT A

SCOPE OF WORK

- Prepare a written document of meeting agreements and unresolved activities.
- Prepare a schedule for completing the closeout activities for this Agreement, based on determinations made within the meeting.

Deliverables:

- Written documentation of meeting agreements
- Schedule for completing closeout activities
- Findings, conclusions, and recommendations

TASK 2 – STANDARDS UPDATE MEASURE IDENTIFICATION AND ANALYSIS

At the direction of the CAM, the Contractor shall identify energy and peak load savings opportunities (measures) for residential buildings for updates to the Standards. The measures to be considered may include, but are not limited to, more energy efficient levels of the measures currently included in the Standards, measures for achieving California's zero net energy goals, measures that are options for compliance in the performance standards but are not required, and new measures proposed by stakeholders.

For each identified measure, this task will include development and documentation of plans for additional information about the measure required for completion of subsequent tasks. Contractor will document the proposal for each measure in a draft Measure Proposal (see example at:

http://www.energy.ca.gov/title24/2016standards/prerulemaking/documents/New_Measure_Proposal_Template.docx. Contractor shall be prepared to complete the necessary research and analysis required by the appropriate Measure Proposal template. This draft will be submitted to the CAM for approval. Upon the CAM's approval of the draft, the CAM, in consultation with the Contractor, shall schedule the date and location for the workshop(s) for public review. The Contractor may be directed to present the measure(s) at the workshop and, working with Energy Commission staff and subject matter experts, address issues raised by stakeholders at the workshop and incorporate changes into a revised Measure Proposal. Additional workshop(s) to review the revised Measure Proposal will be held if the CAM deems it necessary. As directed, the Contractor will address additional measures or issues identified in later workshops or comments.

Work in this task may also include:

- Review of national or international energy conservation codes for their relevance to the Standards Update;
- Updates to the Compliance Manual; and
- Development, research, and analysis of proposed or potential measures to meet the requirements for inclusion in the Standards.

Deliverables:

- One or more Draft Measure Proposals
- One or more Final Measure Proposals
- Reports on research and analysis of proposed or potential measures, or other energy codes, as requested
- Compliance Manual updates

EXHIBIT A

SCOPE OF WORK

- Other deliverables to be defined as needed through Work Authorizations

TASK 3 – RESIDENTIAL STANDARDS PUBLIC DOMAIN COMPLIANCE APPLICATION & MAINTENANCE

Update *CBECC-Res* to assist in developing the Standards and add additional user interfaces as necessary to translate building energy performance data and energy related building operational characteristics into an application that applies the performance standards requirements under consideration for the Standards to residential building designs, calculating annual energy budgets, and providing comparative results. The work in this task is expected to include but not be limited to the following:

- Piloting and beta testing new versions of the *CBECC-Res* internally, and with the Energy Commission and building industry stakeholders;
- Modeling building design scenarios appropriate for zero net energy buildings to include at least the following systems and compliance options under the Standards:
 - Photovoltaic and fuel cell systems.
 - Solar thermal systems.
 - Residential HVAC and water heating.
 - Envelope modeling.
 - Residential lighting. and
 - Quality Insulation Installation;
- Preparing instructions for users that explain how the *CBECC-Res* application should be used to demonstrate compliance with the Standards; and
- Preparing documentation that explains all significant modifications made to the Standards Data Dictionary, the Standards compliance ruleset and the *CBECC-Res* application.
- Providing support for the current *CBECC-Res* application to ensure a successful transition to future versions of the *CBECC-Res* application.

Deliverables:

- Residential Standards Development Analysis *CBECC-Res* Application Functional Requirements
- Residential Standards Development Analysis Application Specifications
- Residential Standards Development Analysis Application
- Residential Standards Development Analysis Application Documentation
- Updates to the *CBECC-Res* application, as needed
- Other deliverables to be defined as needed through Work Authorizations

EXHIBIT A

SCOPE OF WORK

TASK 4 – ENHANCE AND SUPPORT DATA EXCHANGE INFRASTRUCTURE FOR HERS PROVIDER DATA REGISTRIES AND ENERGY COMMISSION DOCUMENT REPOSITORY

Provide technical support for the data exchange protocols and data dictionary that together provide the necessary infrastructure on which private parties develop HERS Provider Data Registry and which defines the data stored in the Energy Commission document repository. This task is identical to work authorized in previous contracts. This task will include reviewing Standards compliance documents and their related technical specifications, the current HERS Provider Data Registry technical and functional specifications, document repository database architectures, and existing data exchange schema used to communicate Standards-related building energy performance. The work in this task is expected to include, but not be limited to, the following:

- Enhancing the data dictionary and data exchange protocols;
- Updating the residential compliance document xml template infrastructure that is specified in the Standards;
- Developing an automated process for testing Registry compliance forms;
- Piloting new data exchange protocols to/from registries;
- Reviewing and analyze the results of Energy Commission surveys of Compliance documents;
- Updating the HERS Provider Data Registry Requirements Manual as needed; and
- Updating the Energy Commission data repository to add search features and reporting.

Deliverables:

- Updated Data Dictionary
- Updated Schema for Compliance Documents
- Updated Document Templates (.xslt)
- Updated Report Generator programming based on the above deliverables
- Updated Data Exchange Protocols
- Updated Data Registry Requirements Manual
- Data Exchange Pilot with Standards Data Registries
- Other deliverables to be defined as needed through Work Authorizations

TASK 5 – RESIDENTIAL PUBLIC DOMAIN COMPLIANCE APPLICATION DEPLOYMENT

Support the Energy Commission's deployment of the *CBECC-Res* Standards compliance application. The work in this task is expected to include, but not be limited to, the following:

- Identifying, updating, and tracking issues identified through project team and stakeholder reviews of the *CBECC-Res* compliance application;
- Testing the *CBECC-Res* application internally, through third parties potentially including subcontractors (Energy Commission staff may conduct their own separate testing);

EXHIBIT A

SCOPE OF WORK

- Piloting and beta testing new versions of the *CBECC-Res* application with building industry stakeholders to identify and improve issues prior to release;
- Providing technical support to third-party application vendors for their integration of the *CBECC-Res* Application Programming Interface (API) into third-party application tools, including
 - Documenting all updates to the compliance application data model and rulesets, and
 - Developing solutions to vendor issues as directed;
- Establishing a public website and host the *CBECC-Res* open source application and include a bug reporting mechanism on this public website; and
- Establishing procedures for the Energy Commission to assume responsibility for this public website at the conclusion of the Agreement.

Deliverables:

- Updated versions of the *CBECC-Res application*, including updates to its documentation
- *CBECC-Res* compliance application issue tracking reports
- *CBECC-Res* compliance application source code posted to open source on-line repository
- Other deliverables to be defined as needed through work authorizations

TASK 6 – CONTINGENCIES AND ADDITIONAL TOPIC AREAS FOR BUILDING STANDARDS TECHNICAL SUPPORT

The Contract team shall assist with work to develop program components beyond what is specifically described in Tasks 2-5 related to Building Standards technical support. The work in this task is expected to include, but not be limited to, the following:

- Providing technical expertise to conduct unexpected research and analysis needed to develop program components as they arise throughout the agreement period.
- Attending Workshops and Hearings that support the Standards update.

Deliverables:

- To be defined as needed through Work Authorizations

Deliverables

The following deliverables chart does not represent all deliverables necessary to complete the goals and objectives of this agreement. Additional deliverables will be outlined in work authorizations. For deliverables listed, work authorizations will specify exact due dates.

EXHIBIT A

SCOPE OF WORK

TASK #	DELIVERABLES	TENTATIVE DUE DATES
1.1		
	Updated schedule of deliverables (if applicable)	3 rd quarter 2018
1.3		
	Invoices	Monthly
1.5		
	Monthly Progress Reports	Monthly
1.6		
	Written documentation of meeting agreements	4 th quarter 2021
	Schedule for completing closeout activities	4 th quarter 2021
	Findings, conclusions, and recommendations	4 th quarter 2021
2		
	One or more Draft Measure Proposals	4 th quarter 2019
	One or more Final measure Proposals	1 st quarter 2020
	Reports on research and analysis of proposed or potential measures, or other energy codes, as requested	TBD per Work Authorization
	Compliance Manual updates	2 nd quarter 2021
	Other deliverables to be defined as needed through Work Authorizations	TBD per Work Authorization
3		
	Residential Standards Development Analysis CBECC-Res Application Functional Requirements	2 nd quarter 2021
	Residential Standards Development Analysis Application Specifications	3 rd quarter 2020
	Residential Standards Development Analysis Application	2 nd quarter 2021
	Residential Standards Development Analysis Application Documentation	2 nd quarter 2021
	Updates to the CBECC-Res application as needed	2 nd quarter 2021
	Other deliverables to be defined as needed through Work Authorizations	TBD per Work Authorization

EXHIBIT A

SCOPE OF WORK

TASK #	DELIVERABLES	TENTATIVE DUE DATES
4		
	Updated Data Dictionary	TBD per Work Authorization
	Updated Schema for Compliance Documents	TBD per Work Authorization
	Updated Document Templates (xslt)	TBD per Work Authorization
	Updated Report Generator programming based on the above deliverables	TBD per Work Authorization
	Updated Data Exchange Protocols	3 rd quarter 2021
	Updated Data Registry Requirements Manual	TBD per Work Authorization
	Data Exchange Pilot with Standards Data Registries	TBD per Work Authorization
	Other deliverables to be defined as needed through Work Authorizations	TBD per Work Authorization
5		
	Updated versions of the <i>CBECC-Res</i> application, including updates to application documentation	TBD per Work Authorization
	<i>CBECC-Res</i> application issue tracking reports	First update 3 rd quarter 2018. Future updates TBD per Work Authorization
	<i>CBECC-Res</i> Compliance application source code posted to open source on-line repository	First update 3 rd quarter 2020. Future updates TBD per Work Authorization
	Other deliverables to be defined as needed through Work Authorizations	TBD per Work Authorization
6		
	Other deliverables to be defined as needed through Work Authorizations	TBD per Work Authorization

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: BRUCE A. WILCOX, P.E.

RESOLVED, that the State Energy Resources Conservation and Development Commission (Energy Commission) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the Energy Commission approves Agreement 400-17-005 with Bruce A. Wilcox, P.E., for a \$4,000,000 contract to provide technical support for the Residential Building Energy Efficiency Standards process; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the Energy Commission.

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the California Energy Commission held on May 9, 2018.

AYE: [List of Commissioners]

NAY: [List of Commissioners]

ABSENT: [List of Commissioners]

ABSTAIN: [List of Commissioners]

Cody Goldthrite,
Secretariat